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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,882	03/12/2004	Do-young Seung	1568.1095	4895

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT PAPER NUMBER

1742

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

<b>Office Action Summary</b>	<b>Application No.</b> 10/798,882	<b>Applicant(s)</b> SEUNG ET AL.	
	<b>Examiner</b> George P. Wyszomierski	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/24/2006 (Election).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6, 13 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                                  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/12/04, 2/10/05</u> | 6) <input type="checkbox"/> Other: _____   |

Art Unit: 1742

1. Applicant's election with traverse of claims 1-14 and the Iron species in the reply filed on July 24, 2006 is acknowledged. (It is noted that the listing of claims readable on the elected species appears to be incorrect in that reply; during a telephone conversation between the examiner and Mr. Ralph Webb on August 31, 2006, it was agreed that the Iron species was elected and that claims 1-5, 7-12 and 14 would be examined). The traversal is on the ground(s) that no serious burden would exist in examining all claims in the application. This is not found persuasive because as stated in the requirement for restriction/election, the various products and processes claimed would be searched in different areas. Further, with respect to the election of species requirement, the two species are directed to completely different materials capable of separate manufacture, use, and/or sale.

The requirement is still deemed proper and is therefore made FINAL. Claims 15-20 are withdrawn from consideration as being directed to a non-elected invention, and claims 6 and 13 are withdrawn from consideration as being directed entirely to non-elected species. Claims 1-5, 7-12 and 14 will be examined to the extent that they read on the elected species.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The meaning of the phrase "approximately less than" in this claim is unclear. Clarification is required.

Art Unit: 1742

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris et al. (U.S. Patent 4,952,465).

Harris discloses a device for absorbing hydrogen and recombining oxygen, i.e. a fuel cell, including a positive electrode, a negative electrode, an electrolytic membrane, and a separator disposed between and in contact with one of the electrodes and including an amorphous metal alloy. Note particularly Figures 2 and 3 and columns 9 and 10 of Harris. Thus, Harris et al. is held to fully meet all aspects of the claimed invention.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-5, 7, 9-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al. in view of Peker et al. (PG Pub. 2003/0062811).

The Harris patent, discussed supra, indicates that the amorphous alloy used therein may be an iron-base alloy (see Harris column 5, lines 20-48), but does not disclose the specific alloys recited in instant claims 7 and 14 or the properties recited in claims 2-4 and 9-11. Peker, particularly paragraph [0084] therein, indicates that the alloys recited in the instant claims are

Art Unit: 1742

particularly suitable materials to be used as part of a metal frame to be used to at least partially encase at least one electronic component. Peker paragraphs [0075] and [0076] indicate that such materials possess the fracture toughness and elastic limit values as recited in present claims 3, 4, 10 and 11. While the prior art does not specify the corrosion rate of such materials in a hydrogen-saturated solution, it is a reasonable assumption that this property of the Peker alloys would be within the range of instant claims 2 and 9, given that the actual materials are identical in both cases. It would have been an obvious expedient for one of ordinary skill in the art to employ the alloys of Peker et al. as the amorphous material of Harris et al., given the desirable properties of these alloys as detailed by Peker et al.

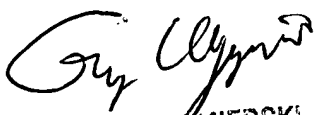
7. The remainder of the art cited on the attached PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, *supra*.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300. This Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW  
August 31, 2006

  
GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 1742